

State of Hawaii  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
Division of Forestry and Wildlife  
Division of Aquatic Resources  
Honolulu, Hawaii 96813

December 8, 2006

Chairperson and Members  
Board of Land and Natural Resources  
State of Hawai'i  
Honolulu, Hawai'i

Land Board Members:

**SUBJECT:   REQUEST FOR APPROVAL OF DEPARTMENTAL POLICIES  
RELATING TO THE USE OF FIREARMS FOR NATURAL  
RESOURCE MANAGEMENT, AERIAL SHOOTING OF FERAL  
ANIMALS, AND HELICOPTER OPERATIONS**

This submittal requests the Board to approve the attached policies, relating to use of firearms for natural resource management, aerial shooting of feral animals, and helicopter operations for use as Departmental policy applicable to every Division except the Division of Conservation and Resources Enforcement.<sup>1</sup>

**BACKGROUND:**

Hawaii's native forests are essential to the environmental and economic well-being of Hawai'i, as habitat for many species of endangered birds and plants and as watersheds, the primary source of water for residential, commercial, and agricultural use. Unchecked feral animal populations (including pigs, goats, sheep, cattle and deer) constitute a primary threat to the integrity of these forests, as the presence of these animals significantly impairs watershed function, contributes to erosion, modifies habitat, destroys understory plants and damages trees, and spreads invasive weeds. In addition, these animals have also been observed migrating in increasing numbers from State land into adjacent residential or agricultural areas, causing property damage and economic loss to neighboring lands.

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<sup>1</sup> The Division of Conservation and Resources Enforcement (DOCARE) is responsible for enforcement activities of the Department. DOCARE has full police powers and enforces all State laws and rules involving State lands. The division also enforces laws relating to firearms, ammunition, and dangerous weapons and is involved in marijuana eradication activities. As a result, their use of firearms and helicopters is for different purposes, and subject to policies specific to their activities.

Years of research have demonstrated that public hunting or the use of volunteer hunters cannot keep animal populations low enough to prevent degradation to the native forest and watershed, particularly in remote areas. As a result, DLNR has worked with partners, such as the National Park Service and the Nature Conservancy, as part of established watershed partnerships and other collaborative efforts, to develop effective control programs to minimize the effects of these animals on the native forest. Because animal reproductive rates are high, effective control programs often use a variety of methods to reduce the feral animal population in an area to very low levels or zero as quickly as possible. In developing a comprehensive control program for a particular area, DLNR combines some or all the following control methods: fencing, hunting, live-trapping, staff control, snaring, and aerial shooting.

The use of firearms is essential to manage wildlife populations to prevent or limit damage to the State's unique native plant and animals, forested watersheds, and natural area reserves. Aerial shooting is an important tool, especially in areas where steep terrain makes hunting from the ground unsafe or ineffective or where remoteness makes an area inaccessible as a practical matter. It is a highly effective method to reduce animal numbers quickly in areas where large herds have a demonstrated impact on the environment (e.g., goats on Moloka'i) and to remove remnant animals from large areas (e.g., feral cattle in west Maui). The use of helicopters is critical to access many of the remote forested areas over which DLNR has management responsibility.

Because the use of firearms, aerial shooting, and the use of helicopters come with inherent risks, the Department has adopted policies regarding their use. These policies are periodically reviewed and revised as needed to maintain the highest levels of safety and compliance with other rules and regulations. This Board submittal requests the adoption of the most recent revised version of these three policies.

#### POLICY REVISION PROCESS:

The Division of Forestry and Wildlife (DOFAW) initiated the current review of the policies in 2003. The specific issues identified for review were compliance with State and Federal firearms laws and regulations, use of specialized equipment, and worker and public safety considerations (including training). During the review, DOFAW staff collected information on past, current, and future DOFAW uses, reviewed State and Federal statutes and regulations on firearms and aerial shoot operations, interviewed DOFAW and other agency personnel, including interviews with personnel from resource protection agencies in other states and with personnel from Federal agencies (NPS and USDA/APHIS), and jointly developed personnel policy and safety issues with the Chairperson's office and the Division of Conservation and Resources Enforcement.


After this review, a revised draft of the policies was developed and circulated for internal review. Primary changes from the previous policies include clarification about the use of specialized firearms, elaboration on training requirements for firearms use and aerial shooting, elaboration on registration and storage of firearms or accessories owned by the Division, and inclusion of information on background checks. The draft policies were then distributed to the Department of

Human Resources Development (DHRD), to the Hawaii Government Employees Association (HGEA), and to United Public Workers (UPW) for their review and comment. After consideration of the comments submitted, DOFAW made additional revisions to the policies (primarily technical changes), circulated the revisions for internal DOFAW review, and then to the other DLNR divisions for their review and comment. The policies are now submitted for consideration and approval by the Board (Attachments 1, 2, and 3) for use by DOFAW and for any other division of the Department utilizing firearms, aerial shooting, or helicopters during the course of natural resource management. These policies are not intended to apply to DOCARE in their function as enforcement officers.

RECOMMENDATION:

That the Board approve the attached Firearms Policy, Aerial Shooting Policy for Feral Animals; and Helicopter Operating Policy for use as Departmental policy applicable to every Division except the Division of Conservation and Resources Enforcement.

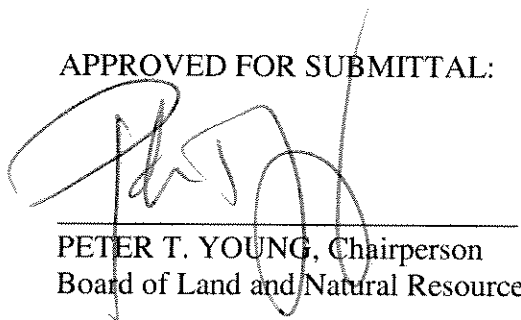
Respectfully submitted,



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PAUL J. CONRY, Administrator  
Division of Forestry and Wildlife

APPROVED FOR SUBMITTAL:

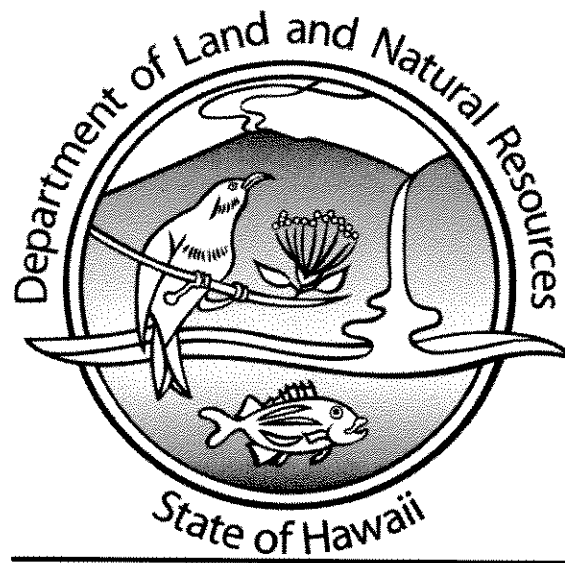


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PETER T. YOUNG, Chairperson  
Board of Land and Natural Resources

Attachment 1: Firearms Policy  
Attachment 2: Aerial Shooting of Feral Animals Policy  
Attachment 3: Helicopter Operating Policy

State of Hawaii  
Department of Land and Natural Resources



Firearms Policy

August 2006

**DEPARTMENT OF LAND AND NATURAL RESOURCES  
FIREARMS POLICY**

**I. Purpose**

This document establishes the Department of Land and Natural Resources (DLNR) policy regarding the training, use and care of firearms authorized for “official duty” to carry out required natural resource conservation and management activities of the Department. This policy also contains authorized exemptions from state and federal firearms regulations as provided under Hawaii Revised Statutes (HRS) § 134-11 and 18 USC 922 (27 CFR 178 and 179) and any departmental special conditions or restrictions for firearms use.

**II. Authority**

The Department of Land and Natural Resources (DLNR) is mandated to: sustain water yields by protecting and enhancing the condition of Hawaii’s forested watersheds (HRS 183-1.5); protect, manage and enhance the conditions of Hawaii’s natural area reserves (HRS 195-4); protect Hawaii’s unique native plant and animal species from extinction whenever possible (HRS 195D), manage the wildlife resources of the state (HRS 183D-2), and control predators harmful to wildlife (HRS 183D-65). The use of firearms is required to perform this work.

**III. Applicability**

The Division of Forestry and Wildlife (DOFAW) is the primary division within DLNR authorized to use firearms for these purposes. All references in this policy to Branch Manager, Administrator, and employees shall apply to DOFAW. This policy does not apply to the Division of Conservation & Resource Enforcement (DOCARE). However, should any other DLNR Division use firearms to carry out natural resource conservation and management activities, this Policy shall apply to that Division.

**IV. Distribution and Training**

This policy will be distributed to the Administrators of each Division of DLNR, and within DOFAW, to the four DOFAW Branch Managers and to DOFAW Administrative staff. The DLNR Administrators will be responsible for distribution and training on these policies within their respective Divisions. Within DOFAW, the Branch Managers for each DOFAW branch will be responsible for distributing of these policies to all employees or volunteers who use, or who may use, firearms, for ensuring that those employees and volunteers understand these policies, and for coordinating training as necessary.

**V. Definitions**

**Background Check:** The criminal history record check of an employee or volunteer’s history to determine if there is any record of a felony or domestic abuse misdemeanor or any other condition that would prohibit possession of a firearm.

**Employee:** For the purposes of this policy, the term “employee” shall include all paid staff of the Department of Land and Natural Resources and contract employees.

**Firearms:** For the purposes of this policy, “firearms” include any shotgun, rifle, or handgun used for natural resources management purposes including guns capable of delivering immobilizing drugs and projecting nets for animal capture. Firearms do not include starter pistols or similar tools not capable of firing live ammunition.

**Natural Resources Management Purposes:** For the purposes of this policy, “natural resource management purposes” include but are not limited to the following activities: euthanizing injured or sick wildlife, killing or hazing nuisance animals and birds, predator and pest control, ungulate control, aerial shooting of ungulates, collecting animals for research and or other studies, capture of wildlife using dart guns or net guns, and protection from dangerous animals like wild dogs.

**Specialized Firearms and Accessories:** In most cases, firearms available for use by the general public are adequate but there are activities where specialized equipment is necessary for program efficiencies. For purposes of this policy, “specialized firearms and accessories” means those firearms and accessories that are prohibited for possession and use by the general public but available to the Department under exemptions provided to state or federal agencies for official use, subject to proper permitting and documentation (HRS § 134-11 and Federal firearms laws and regulations (18 USC 922 and 27 CFR 178 and 179)). Only those specialized firearms and accessories approved by the Chairperson and which have all necessary federal and state permits and registrations are authorized under this exemption. Pertinent examples of specialized firearms and accessories are silencers and some large capacity magazines (LCM – i.e. magazines that accept more than 10 rounds). However, the use of silencers for aerial shooting is prohibited, but may be allowed in for non-aerial shoot activities. Any LCM manufactured after September 13, 1994, or any LCM that can be used in a pistol is considered a specialized firearm accessory under this policy.

**Volunteers:** For purposes of this policy, the term “volunteer” means a volunteer as defined and covered in HRS Chapter 90.

## **VI. General Guidelines**

### **A. Authorized Firearms Users.**

1. Only those employees authorized to use firearms in their job description or approved by the Branch Manager and the Administrator and volunteers approved by the Branch Manager may use firearms for official duty.
2. Only those employees and volunteers who have satisfactorily passed a background check to determine if they can legally possess a firearm may use firearms for official duties.

3. Only those employees and volunteers specifically designated by the Branch Manager and with the written approval of the Administrator and Chairperson may use specialized firearms and accessories for official duties.
4. Only those employees and volunteers that can meet the minimum requirements for the possession and carry of a firearm as identified in HRS Chapter 134 shall be authorized.
5. Authorized employees and volunteers shall have a valid state photo identification with them at all times while using firearms for official duties.
6. Only those employees and volunteers that have successfully completed the required training (see Section VIII.) may use firearms.

**B. Authorized Use.** Employees and volunteers are authorized to use firearms while on official duty for the following purposes:

1. Approved predator or pest control projects. Species to be controlled include but are not limited to: rats, mongoose, feral dogs, feral cats, nuisance birds, rabbits, and snakes.
2. Approved ungulate control projects. Species which may require control include, but are not limited to pigs, sheep, goats, mouflon sheep, wild cattle, and deer.
3. Approved animal capture projects involving the use of tranquilizer guns, cannon nets and other equipment launched by explosive cartridge.
4. Hazing or scaring nuisance wildlife.
5. Aerial control operations.
6. Research projects with DLNR approved study plans.
7. Scientific collecting under the conditions of a DLNR permit.
8. Personal protection from injury by dangerous animals like wild dogs. Prior approval required from the Branch Manager, except where there is an imminent threat of serious injury or death.
9. Firearms training and certification.

**C. Authorized Firearms.**

1. Any shotgun or rifle owned and registered by the Department.
2. Department owned handguns, properly registered, with the written approval of the Branch Manager and Administrator.
3. Specialized firearms and accessories may be used only with written approval of the Branch Manager, Administrator, and Chairperson and only for purposes authorized. The specialized firearms or accessories approved for use by the Chairperson are listed in Appendix I. Appendix I will be updated and distributed whenever new approvals are secured.
4. Personally owned rifles, shotguns, or handguns may be used with written approval by the Branch Manager and Administrator and if necessary for program purposes. Employees and volunteers will not be compensated for any lost, stolen or damaged personal firearm used on the job.

5. Wildlife capture equipment, such as dart guns and net guns.

**D. Restrictions.**

1. Department owned firearms may not be used for personal use or recreational hunting.
2. Specialized firearms and accessories may only be used for purposes authorized by the Branch Manager, Administrator, and Chairperson.
3. With the exception of capture equipment, no Department owned firearms may be loaned outside the Department without the approval of the Administrator.
4. No employee or volunteer shall carry or use a firearm while consuming or while under the influence of alcohol or controlled substances, except as prescribed by a licensed physician. No employee or volunteer shall carry or use a firearm while under the influence of a controlled substance prescribed by a licensed physician if the prescription impairs the employee's or volunteer's ability to use a firearm safely.

• **Registration and Purchase of New Firearms**

All firearms owned by the Department must be registered with the County of the Branch where purchased and inventoried. All firearms shall be registered under the Department and Division with the Branch Manager designated as the party authorized by the Chairperson to sign for the registration on behalf of the Department. To purchase a firearm for the Department, the Branch Manager must obtain a letter of authorization from the Administrator, along with approval from the Chairperson. The letter shall identify the Branch Manager as the party authorized by the Department to obtain a permit to purchase and register the firearm once acquired. The Branch Manager shall be responsible to ensure that the firearm(s) inventoried and registered under their branch are being used legally.

Any specialized firearm or accessory owned by the Division must be registered as above and, in the case of firearms as defined by the National Firearms Act, registered with the National Firearms Registration and Transfer Record. Large capacity magazines which qualify as specialized firearm accessories shall be documented either by official letter, registration as described above, or whatever form required by the County in the County Police Department where inventoried.

The documentation to acquire and register any specialized firearm or accessory owned by the Division shall include 1) a written statement from the person authorized by the Branch Manager and Administrator to use the specialized firearm, stating that the firearm or accessory is being purchased for use in performing official duties and that the firearm or accessory is not being acquired for personal use or for purposes of transfer or resale; and 2) a written statement from the Administrator, stating that the authorized person is acquiring the firearm or accessory for use in official duties, that the firearm or accessory is not being acquired for personal use or for purposes of transfer or resale.



### **VIII. Training**

All employees or volunteers using firearms for official duty are required to satisfactorily complete a Hawaii Hunter Education class or equivalent before carrying or using firearms on official duty.

All employees or volunteers using handguns for official duty are required to satisfactorily demonstrate competence in the use of handguns through successful completion of a handgun certification class from the National Park Service or equivalent before carrying or using handguns on official duty.

In addition to the training requirement above, all employees using firearms for aerial shooting must complete a National Park Service Gunners-Operational airborne instruction and check ride qualification (recurrence every 3 years) or a USDA/APHIS or DLNR equivalent, and a firearm qualification course (recurrence every 5 years). It is the responsibility of the Branch Manager to identify appropriate training and certifications needs.

### **IX. Storage and Transport**

Firearms, accessories and ammunition, must be stored in a gun safe where available. If a gun safe is not available, the firearms, accessories, and ammunition shall be stored in a locked metal case and/or storage cabinet in a lockable area or room and must be locked at all times.

Firearms are to be unloaded while in transport to and from the field and carried in a commercially manufactured lockable gun case that completely encloses the firearm. Department owned firearms shall be returned to storage areas and shall not be left in vehicles overnight at the employee's or volunteer's home or workstation.

### **X. Reporting**

Any injury to a person caused by a firearm under the control of an employee or volunteer shall be reported immediately to the employee or volunteer's supervisor, Branch Manager, Administrator, DOCARE, and the local Police. Any unsafe operating conditions or property damage caused by a firearm under the control of an employee or volunteer shall be reported to the employee or volunteer's supervisor, Branch Manager, Division Administrator, DOCARE, and Police immediately. In the event that a Department or Division firearm or specialized accessory is lost or stolen, the employee or volunteer shall immediately notify their supervisor, Branch Manager, Administrator, DOCARE, and the local Police.

### **XII. Policy Approvals and Effective Date**

This policy becomes effective on approval by the Chairperson of the Department of Land and Natural Resources.

Recommend Approval:

DLNR Firearms Policy  
(applicable to all DLNR Divisions except DOCARE)  
August 2006

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Paul J. Conry, DOFAW Administrator  
Division of Forestry and Wildlife

Date

Approved:

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Peter T. Young, Chairperson  
Department of Land and Natural Resources

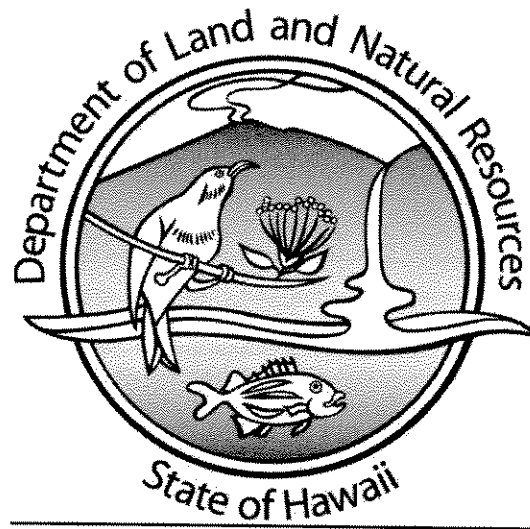
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## **Appendix I**

### Specialized firearms and accessories approved for use as of August 9, 2006

- Large capacity magazines (i.e., magazines that accept more than 10 rounds) for ungulate, predator, or pest control.

State of Hawaii  
Department of Land and Natural Resources



Aerial Shooting Policy  
for Feral Animals

**August 2006**

**DEPARTMENT OF LAND AND NATURAL RESOURCE  
AERIAL SHOOTING POLICY  
for FERAL ANIMALS**

**I. INTRODUCTION**

The Department of Land and Natural Resources (DLNR) is mandated to: sustain water yields by protecting and enhancing the condition of Hawaii's forested watersheds (HRS 183); protect and enhance the conditions of Hawaii's unique native plant and animal species (HRS 195); and protect species from extinction whenever possible (HRS 195D). In many areas, feral animals threaten DLNR's ability to satisfy these mandates. Aerial shooting is often the most effective management tool available to control feral animals in remote forested watersheds or when directed by court order (*Palila et. al. vs. Hawaii DLNR*). However, aerial shooting is complex and highly hazardous work involving both firearms and helicopters. The primary Division within DLNR engaged in aerial shooting is the Division of Forestry and Wildlife (DOFAW). Safety is of utmost concern. The purpose of the following policies and procedures is to ensure that all aerial shooting operations conducted by DOFAW are performed in a safe and effective manner. This policy does not apply to the Division of Conservation & Resource Enforcement (DOCARE). However, should any other DLNR Division use firearms for aerial shooting of feral animals, this Policy shall apply to that Division.

This Policy is modeled after the Haleakala National Park Policy for Standard Operating Procedure for Aerial Feral Animal Removal (March 1, 1999). Other policies and guidelines consulted in developing this policy were the USDA/APHIS Wildlife Services Aviation Safety and Operations Manual (February 1992) and those of other State Fish and Wildlife Agencies. This Policy deviates from the National Park policy by 1) allowing a broader use of firearms for aerial shooting operations (also done by other State Fish and Wildlife Agencies), 2) providing a longer notification period for the public and adjacent landowners (required under some circumstances and as a courtesy to public), 3) allowing a different seating arrangement in the helicopter when needed for operational safety or efficiency (USDA/APHIS policy).

This policy will be distributed to the Administrators of each Division of DLNR, and within DOFAW, to the four DOFAW Branch Managers and to DOFAW Administrative staff. The DLNR Administrators will be responsible for distribution and training on these policies within their respective Divisions. Within DOFAW, the Branch Managers for each DOFAW branch will be responsible for distributing of these policies to all employees or volunteers who use, or who may use, firearms, for ensuring that those employees and volunteers understand these policies, and for coordinating training as necessary.

## **II. OPERATING POLICIES of AERIAL SHOOTING**

### **A. General**

- 1) All aerial shooting missions shall operate under 'DLNR Helicopter Operating Policies' with particular reference to Special Use Missions and, where applicable, Overwater Missions.
- 2) All missions require prior written approval from the Branch Manager and the Division Administrator. The Branch Manager and Administrator shall document approval in the form of a signed memo which may include a description of the mission, geographic area, flight dates (with alternate dates due to possible cancellation), schedule of the mission, all firearms and any special accessories to be used on the mission, and a list of participants (with alternates) as well as include a copy of the purchase order for the helicopter rental.
- 3) The Administrator and Branch Manager will approve which firearm and any special accessories that will be used for each mission. Only firearms and special accessories approved under the DLNR Firearms Policy will be authorized.
- 4) The pilot, gunner and/or Branch Manager (or designee) may terminate the mission if they feel the safety of the mission crew and/or the public may be compromised. If DOCARE officers witness a potentially dangerous situation involving the mission, they are authorized to order the termination of the mission.
- 5) The number of personnel participating in a mission is limited as follows:
  - \* Low elevation missions (generally, flights below 6,000') - 3 people: the pilot, gunner and a qualified spotter/recorder if needed.
  - \* High elevation missions (generally, flights above 6,000') - 2 people: the pilot and gunner.

Whether or not a mission constitutes a high-elevation mission depends upon several factors, including the aircraft used, the time of day, the temperature, and the weight of the passengers. The determination will be made in consultation with the pilot, based on the weight/balance of the aircraft, with its passengers and equipment, and the density altitude of the mission area.

- 6) All missions must have a completed Flight Plan and Aerial Control Trip Report.
- 7) A cell phone and handheld radio must be on board the helicopter.
- 8) The salvage of meat for personal use by Department personnel is prohibited. With advance permission of the Administrator, meat may be salvaged and available for pick-up by members of the community on a first-come, first-serve basis. Where salvage has been approved by the Administrator and is feasible, the legal notice of the mission shall include a statement informing interested persons to contact DOFAW for more information about meat pick-up. Salvage of meat shall not compromise safety. A copy of the meat harvesting pre-authorization form shall be forwarded to DOCARE Administrator prior to that actual eradication flight.

### **B. Permission and Designated Control Areas**

- 1) The Administrator shall approve all aerial shooting plans prior to their implementation.

- 2) Designated control areas must be defined on a map. Shooting outside of the control area is prohibited.
- 3) Locations of animals outside of designated control areas should be noted. In the future, public hunting efforts could be directed towards these areas if they are accessible. Alternately, these areas may be included in future missions.

**C. Notifications**

- 1) Missions shall be scheduled during periods when public use of the designated control area is thought to be at a minimum.
- 2) Legal notices shall be published in local newspapers by the Branch Manager at least 15 calendar days prior to the aerial shooting indicating the dates shooting will take place (as well as alternate dates) and a description of the area it will occur in.
- 3) In addition to the legal notice, the Branch Manager shall also:
  - a) Place written notice at entry points into the designated area prior to or on the day of the shoot.
  - b) Close the designated control area to public use, where feasible.
- 4) Cooperating and adjacent landowners will be notified by the Branch Manager by dated letter at least one week in advance of the mission.
- 5) DOCARE shall be provided notification and copies of all plans and authorizations for the mission at least one week in advance of the mission.

**D. Training and Certifications**

- 1) Only helicopter companies whose pilots and aircraft are certified by the Office of Aircraft Services (OAS), USDA/APHIS, or equivalent as being qualified for aerial shooting missions, will participate in aerial shooting missions.
- 2) Aerial shooting will only be conducted by gunners who have satisfactorily completed:
  - a) National Park Service Gunners-Operational airborne instruction and check ride qualification (recurrence every 3 years) or a USDA/APHIS equivalent;
  - b) OAS B-1 Helicopter Safety (4-6 hrs, recurrence every 5 years) or equivalent;
  - c) Aerial Capture, Eradication, and Tagging of Animals (ACETA) training offered by the National Park Service, or equivalent,
  - d) firearms certification to use the weapon in the air and on the ground from the National Park Service, or equivalent (recurrence every 5 years); and
  - e) current first responder and CPR certification.

The Branch Manager will maintain certification records and scheduled training.
- 3) Aerial shooting will only be conducted by gunners who have been approved by the Branch Manager and the Division Administrator. In determining whether to approve a gunner candidate, the Branch Manager and the Division Administrator may consider criteria other than training and certifications to ensure that all missions are carried out with the highest possible safety. Elements to be considered include clear understanding of the purpose of the mission, past work performance, and ability to follow orders and adhere to plans. Decisions of the Branch Manager and Division Administrator shall be made with considerations of safety as the highest priority.
- 4) Gunners shall have completed a hunter education course.
- 5) All participants in the mission shall have appropriate training with helicopters.

### **III. STANDARD OPERATING PROCEDURES**

#### **A. Pre-flight Procedures**

- 1) A Flight Plan will be completed by the gunner or staff member planning the aerial shooting operation and submitted to the Branch Manager or designee prior to the mission.
- 2) A pre-flight briefing will occur and must be attended by the pilot, gunner, spotter (if needed), and other personnel deemed essential to the mission. Items discussed will include:
  - \* Pre-flight check list
  - \* Flight plan
  - \* Current weather conditions and forecast.
  - \* Safety procedures and techniques
  - \* Possible hazards.
  - \* Individual responsibilities
  - \* Helicopter intercom system and DOFAW frequency. If the intercom system is not operable, the mission must be cancelled.
  - \* Pilot to gunner commands for shooting.
  - \* Periodic check-ins with the flight follower. Once every 15 minutes is recommended.
  - \* Where applicable, have the ground spotter's position known.
- 3) Pilot Responsibilities:
  - a) Ensure that all equipment is secured in the helicopter prior to the flight.
  - b) The pilot, in consultation with the spotter, if applicable, and gunner shall establish alternate communications in case the helicopter intercom system fails.
- 4) Gunner/Spotter Responsibilities:
  - a) Ensure that all equipment is secured in the helicopter prior to the flight. Keep equipment and supplies at a minimum to avoid the loss of items in flight and any obstructions that may interfere with a quick exit of the helicopter.
  - b) The gunner shall be seated behind the pilot and the spotter in a side-by-side arrangement with the pilot unless another shooting configuration is necessary for operational safety or efficiency and given approval by the pilot.
  - c) The gunner's firearm must be carried and secured in a manner to insure that it will not fall out of the helicopter at any time.
  - d) The gunner will wear a one-piece gunner safety harness attached as per OAS or USDA directions.
  - e) Ammunition is to be stored beside the gunner in a secure case.
  - f) An approved helicopter safety helmet shall be worn at all times. Gunners will use a helmet that meets or exceeds SPH-4 helmet specifications for impact resistance and noise attenuation qualities. It is recommended the gunner have a voice-activated mike (hot mike) to free their hands during shooting.



**B. In-Flight Procedures**

The following in-flight procedures are subject to change at the discretion of the pilot, based on his/her professional judgment, experience, and consideration of all the factors which influence the overall safety of the mission.

**Pilot Responsibilities:**

- 1) The lower elevation area will be worked first before going to higher elevations to maximize helicopter efficiency, as weight is lost through fuel use.
- 2) Keep focused on the mission's purpose. Do not deviate or modify plans during the mission without notifying the flight follower.
- 3) Follow the approved flight plan.

**Gunner/Spotter Responsibilities:**

- 1) Watch for aerial hazards. Communicate potential hazards to the pilot and never assume the pilot sees everything.
- 2) Between shooting episodes, the firearm should be laid across gunner's laps with a hand securing it.
- 3) The firearm's barrel is to be pointed outward at all times.

**C. Shooting Procedures.**

- 1) Gunner receives clearance from the pilot to chamber ammunition.
- 2) The pilot will notify the gunner when clear to shoot.
- 3) The pilot/gunner commands shall be: 'Load', 'Fire at will' and 'Cease-fire'. The pilot or gunner shall call 'Standby' when firearms jam, reloading, misfire or repositioning the helicopter.
- 4) The safe window for shooting is well below the main rotor and above the landing skid on the vertical plane. The gunner shall not shoot at any target within the radius of the helicopter's main rotor. Extra caution is to be exercised while the helicopter is turning or when shooting uphill on steep terrain.
- 5) Between shooting episodes, the gunner will set 'safety on' then clear the surrounding floor area of any spent cases and secure them until they can be properly disposed of.
- 6) The pilot or spotter may use a GPS unit to record the kill locations for later documentation.

**D. Post-shooting Procedures Before Returning to Heliport.**

- 1) Face the barrel of the firearm to the outside of the aircraft.
- 2) Remove the clip from the firearm, clear the round in the chamber and secure the clip in the ammunition can.
- 3) Ensuring the muzzle is pointing in a safe direction, dry-fire the firearm, then put the safety in the "safe" position.
- 4) Secure equipment: firearm, ammo, etc.
- 5) Notify the pilot and flight follower that you are ready to return to the heli-base.

**E. Post-Flight Procedure**

- 1) Critique the operation with the involved personnel.
- 2) The spotter, flight follower and gunner should compare notes and record all data.
- 3) Inspect, clean, dry and properly store all equipment.

DLNR Aerial Shooting Policy for Feral Animals  
(applicable to all DLNR Divisions except DOCARE)  
August 2006

- 4) The Aerial Control Trip Report must be completed by the gunner and submitted to the Branch Manager within 48 hours of completing the mission.
- 5) Provide DOCARE Administrator and DOFAW Administrator with a signed copy of the Aerial Control Trip Report within 48 hours.

**IV. POLICY APPROVALS AND EFFECTIVE DATE**

This policy becomes effective on approval by the Chairperson of the Department of Land and Natural Resources.

Recommend Approval:

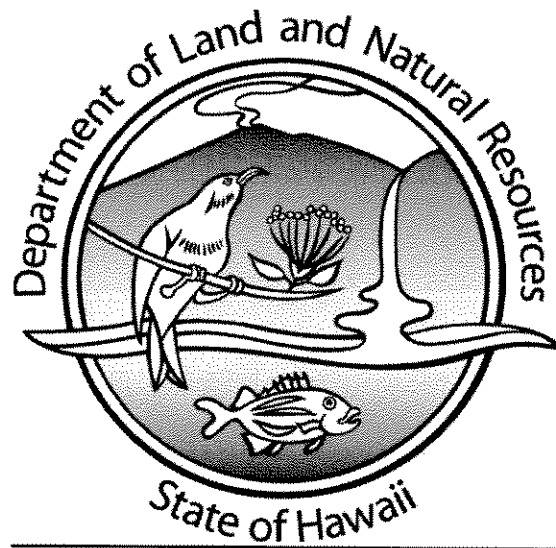
Paul J. Conry, DOFAW Administrator	Date
Division of Forestry and Wildlife	

Approved:

Peter T. Young, Chairperson	Date
Department of Land and Natural Resources	

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State of Hawaii  
Department of Land and Natural Resources



Helicopter Operating Policy

August 2006

**DEPARTMENT OF LAND AND NATURAL RESOURCES  
HELICOPTER OPERATING POLICY**

The Department of Land and Natural Resources (DLNR) relies on the use of helicopters to access many of its remote sites and to efficiently and effectively carry out its management responsibilities. Working with and around helicopters comes with inherent risks. Our number one objective is to establish and maintain the highest level of safety possible in the conduct of helicopter operations. We must prevent accidents and provide for the safety of passengers and ground crew. The Department has a responsibility to ensure that its staff and volunteers are adequately trained and are properly equipped. In the event of an accident, prior training and the right equipment may play a key role in minimizing potential consequences.

The following helicopter operating policies should guide Department staff as they train anyone flying on a DLNR sponsored mission, use helicopters in their work, or react to an emergency, except that this policy does not apply to the Division of Conservation and Resource Enforcement (DOCARE). In the event of life-threatening situations or emergencies, Department personnel may deviate from these policies, but those deviating should be expected to justify their actions.

These policies replace all previous versions of DLNR helicopter policies.

These policies are intended to guide the Department and branches as they set up helicopter operating, training and emergency procedures for their staff. These policies are not intended to serve as step-by-step procedures. Each branch will be responsible for ensuring that these policies are followed and that appropriate procedures are formulated at the branch level. These policies are focused on three areas:

- Standard Operating Procedures
- Training
- Emergency Response

Some additional considerations which are discretionary are attached following the policies.

## **I. STANDARD OPERATING PROCEDURES**

### **A. Officer-in-Charge**

- 1) All flights shall have a designated Officer-in-Charge (OIC) who:
  - is familiar with the Department of Land and Natural Resources helicopter policies,
  - is familiar with the intent and purpose of the mission,
  - is familiar with the geographical location of the mission,
  - is familiar with the capabilities and limitations of the helicopter to be used.
- 2) Only passengers and cargo authorized by the OIC shall be permitted to be carried by the aircraft.

### **B. Pilot authority and responsibility**

The pilot in command (PIC) is directly responsible for, and is the final authority as to the operation of the aircraft. The PIC shall be OAS or Aviation Management (USDA Forest Service) certified and qualified. The PIC may deviate or refuse requests from the OIC when, in his/her judgment, such compliance would be a violation of applicable Federal or State regulations, contracting provisions, or if the operation would be considered hazardous or unsafe. Likewise, the OIC can direct the PIC to cease any dangerous activity or maneuvers.

### **C. Maximum pilot hours**

The PIC shall be limited to the following tours of duty and flight hours. All flight time, whether for DLNR or someone else, counts toward the limitations.

- 1) Flight time shall not exceed a total of 8 hours per day.
- 2) Flight time shall not exceed a total of 42 hours in any 6 consecutive days.
- 3) Pilots accumulating 42 hours of flying in any 6 consecutive days must take a day off before resuming flying.
- 4) Within any 24-hour period, the pilot shall have a minimum of 10 consecutive hours off duty immediately prior to the beginning of any duty day.
- 5) Duty time includes flight time (includes travel or ferry time), ground duty of any kind, and standby or alert status at any location.
- 6) During any 14 consecutive days, the pilot shall be off duty for 2 full calendar days. Days off duty need not be consecutive.

### **D. Cargo loading and unloading operations**

Trained personnel shall supervise loading and unloading operations, including sling operations. This requirement includes both takeoffs and landings at hookup and delivery sites. Radio communications shall be maintained at all times between aircraft and at least one member of the ground crew. The OIC shall negotiate appropriate communications arrangements with the PIC.

- 1) Heli-jumping, repelling, or use of rope ladders shall not be permitted.
- 2) Passengers, other than minimum required flight crew, are not permitted on flights with external loads.

E. Helicopter fueling

- 1) Only trained personnel shall participate in fueling processes.
- 2) All unauthorized personnel shall be at least 100 feet away.
- 3) A fire extinguisher shall be available for use by ground personnel during fueling.
- 4) There shall be no smoking within 100 feet of the fueling operation.

F. Passenger embarking and disembarking

Passengers shall embark or disembark aircraft only when authorized by the PIC. One person in each load shall be responsible to ensure that all other passengers are physically escorted to and from the aircraft, and that doors, seat belts, and other equipment are properly secured during flights and post-flight.

G. Minimum Helispot specifications.

Choice of landing sites and conditions shall be at the discretion of the PIC.

H. Weight Limits

The PIC shall inform the OIC of weight limits for internal and external loads. OIC shall make sure all loads meet specifications.

I. Communication capabilities and procedures

- 1) All aircraft, per contract, shall have working VHF-FM radio communications capable of accessing DLNR frequencies.
- 2) Any operation involving both ground personnel and aircraft (e.g. cargo transfers, passenger pickup and drop off, etc.) must have trained personnel that are in continuous radio communication with the aircraft for the duration of the operation (except as noted in I.3.). The PIC and OIC shall together determine specifics as to working channels, frequency of contacts, etc., and shall develop a communication strategy appropriate to the mission and geographical site.
- 3) For long flights where it is not possible to have ground personnel remain in continuous contact with the aircraft, the PIC shall establish and maintain contact with the local forestry control (FC) to establish a flight following procedure as outlined below:

- Initial contact with FC at lift off giving flight plan and estimated time of arrival,
  - FC notified by aircraft after arrival at destination,
  - FC shall maintain a contact log.
  - A sample Flight Plan to be used in flight following is provided as Appendix I.
- 4) When carrying personnel, the aircraft shall have a handheld VHF-FM radio capable of accessing government frequencies. Its location and method of operation must be known to aircraft occupants. This requirement can be satisfied by personnel carrying their DLNR issued portable radios.

#### J. Personal Protective Equipment

*Definition.* Personal protective equipment (PPE) is protective equipment which the individual takes to the flight and does not include equipment or devices installed on the aircraft or furnished as part of the aircraft operating equipment. Personal protective equipment includes, but is not necessarily limited to boots, gloves, protective headgear, and any fire retardant clothing. All personnel (pilots, crew members, and passengers) are required to wear PPE appropriate to the mission type. DLNR shall issue skull cap, helmet, gloves, and fire shirt or flight suit for use during the mission. All other PPE will be the responsibility of the individual.

***Individuals not wearing appropriate required PPE will not fly.***

*Situation Requirements for wearing PPE:* Requirements for the type of required PPE varies depending on the mission. Required equipment is based on whether the mission type is:

- All missions,
- Point to point,
- Special Use, or
- Overwater.

*All Missions:* The following PPE is required on all DLNR missions:

- Aviator's protective helmet
- Skull cap
- Standard issue boots (DLNR approved)
- Standard issue gloves

*Point-to-Point Mission:* Point-to-Point activities are operations that do not include low-level flights — below 500 feet above ground — on a regular basis or any flight(s) that are exclusive of missions listed under special use below. Point-to-Point missions include missions that involve picking up passengers from one point and transporting them to another. In addition to the equipment listed previously for all missions, the following PPE is required:

- Fire retardant (Nomex or equivalent) shirt (standard-issue fire shirt) and natural fiber pants, or fire retardant flight suit.

*Special Use Mission:* Special use activities are operations which require special considerations to protect personnel due to the nature of the operations. Specialized pilot qualifications and equipment may also be required for these missions. Special use missions include:

- a) External load operations (sling loads, etc.)
- b) Special night operations (infra-red animal census, etc.)
- c) Reconnaissance and surveys
- e) Animal herding/tagging/censusing/control
- f) Flights conducted below 500 feet above ground level on a regular or frequent basis
- g) Operations over and around a fire perimeter
- h) Noxious plant/insect and disease operations
- i) Transporting or dispensing of flammable liquids, flares, or ignition devices
- j) Flights where any take off or landing requires special pilot techniques due to terrain, obstacles, or surface conditions.

In addition to the equipment listed previously for all missions, the following PPE is required for special use missions:

- Fire retardant (Nomex) flight suit or equivalent.

*Overwater Mission:* These are missions where the aircraft is over water and beyond safe gliding distance to land. In addition to the equipment listed above for all missions, and for either point to point or special use, as appropriate, the following PPE is required:

A personal FAA-approved floatation device shall be worn by each person. This may be either supplied by the pilot or by DLNR (at Branch's discretion).

*Additional Optional PPE:* Additional or optional PPE may be worn or carried by individuals at their own choice subject to final say by the OIC or PIC. This may include Emergency Position Indicating Radio Beacons (EPIRB), survival gear, etc.

## **II. TRAINING PROCEDURES AND REQUIREMENTS**

Helicopter training serves several purposes:

- It provides classroom and hands-on familiarization of operating and safety procedures
- It provides classroom and hands-on opportunities for aircraft familiarization
- It provides classroom and hands-on familiarization of emergency procedures
- It should make DLNR personnel and passengers the "best passengers we can be"

The following levels of training should be maintained:

1) All new hires who will be involved with helicopter operations will successfully complete a basic helicopter operating and safety class prior their first flight. Through hands-on training they should know how to:

- move around the aircraft and safely enter and exit the ship,



- work the seatbelts and buckles,
  - open and close doors,
  - use the intercom,
  - locate the fire extinguisher, first-aid kit, portable radio, survival gear,
  - use the GPS (if appropriate),
  - stow gear in the ship (make sure it will not fall or blow out),
  - to drop gear from the ship (e.g., weighted markers, etc.),
  - to wear appropriate clothing/personal protective gear and what not to wear (e.g., baseball hats, synthetic fiber clothing, unattached glasses, etc.),
  - conduct themselves safely during flights (e.g., no sticking hands out while flying).
- 2) All personnel involved with the handling of external cargo loads shall have received training in the various aspects of external loads.
- 3) All personnel involved with helicopter operations must, at a minimum, annually refresh the following skills:
- a) Hands-on familiarization of aircraft including:
    - throttles and engine/fuel shutoff locations,
    - master switch location,
    - emergency gear (flares, emergency locating transmitter (ELT), fire extinguisher, first aid, etc.) locations
  - b) Use of radio systems (fixed and portable) for emergency use.
- 4) Personnel who regularly travel over water shall take some form of “water ditching” training when available.
- 5) Certification for CPR and first aid training shall be kept current for all DLNR personnel involved with helicopter operations. First Responder training is recommended.

### **III. EMERGENCY RESPONSE**

In the event of an accident, people may become disoriented and/or injured to the point where even the simplest tasks may become difficult or impossible to do. Adequate and repetitive training coupled with hands-on familiarization of both the aircraft and safety equipment and procedures are essential to providing the greatest opportunity for appropriate response measures. DLNR personnel should be trained to:

#### **1. Attend to passengers and crew.**

Do not move people with unknown injuries unless there is an immediate need, e.g., fire, drowning.

#### **2. Secure help.**

This usually would involve the use of radio, ELT, EPIRB, flares, etc.

**3. Secure or reduce hazards where appropriate.**

This may include shutting aircraft fuel supply, master switch, etc.

*Additional on-site emergency procedures:*

1. Once rescue personnel have been notified, keep a clear radio channel open. Do not serve as a central control - that is the responsibility for forestry control or other rescue personnel.
2. Be discrete with radio communications - do not use names but instead refer to age, gender, condition of injured personnel.
3. Minimize disturbance at the accident site. Do not move gear, equipment, helicopter parts, etc. unless dictated by need to ensure safety of personnel. The accident scene should be left as intact as possible to assist later investigations.
4. Maintain a log as feasible.
5. Inquiries from the public or press should be directed to the appropriate Division Administrator or up the chain of command as appropriate.

*Additional off-site emergency procedures:*

1. Forestry Control (FC) in the county where the incident occurred, should assume the role of dispatcher once the initial call has been received and act as the communication hub to other rescue personnel. FC should maintain an open line with the accident site.
2. FC should clear all non essential radio traffic from the channel until the incident is declared over by on-site personnel.
3. Be discrete with radio communications - do not use names but instead refer to age, gender, condition of injured personnel.
4. FC should keep a log of all communications, particularly noting facts, decisions, or events.
5. FC should remain on duty until the incident is declared over by on-site personnel.
6. FC should request additional staff (or outside personnel) support as necessary to facilitate expeditious management of the incident, to include notification, status reports for the administration, etc.
7. FC should protect those on-scene from non-essential questions and personnel and other distractions.

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(applicable to all DLNR divisions except DOCARE)  
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8. Inquiries from the press should be directed to the appropriate Division Administrator or up the chain of command as appropriate.

#### **IV. ADDITIONAL CONSIDERATIONS**

- Each Branch should work with the local Fire Department, and area Civil Defense agency, if appropriate, to develop an understanding of each agency's communication needs and capabilities in case of an emergency.
- All DLNR staff who operate radios while on flying missions should know how to access local government emergency channels
- Branches should ensure that radio operators at Forestry Control have adequate training and are qualified to respond in the event of an emergency.
- Cellular phones should be issued to personnel in areas that have coverage.
- If possible, personnel should accompany the PIC in their initial pre-flight inspection of the aircraft. This is an excellent way to become familiar with the aircraft.
- Branches should establish emergency notification procedures and maintain an updated "notification" list for all staff. The list should include:
  - who to notify (up to three names, if desired) with telephone numbers,
  - home address,
  - map or description of how to reach home.

#### **V. POLICY APPROVALS AND EFFECTIVE DATE**

This policy becomes effective on approval by the Chairperson of the Department of Land and Natural Resources.

Recommend Approval:

\_\_\_\_\_  
Paul J. Conry, DOFAW Administrator  
Division of Forestry and Wildlife

\_\_\_\_\_  
Date

Approved:

\_\_\_\_\_  
Peter T. Young, Chairperson  
Department of Land and Natural Resources

\_\_\_\_\_  
Date

**Appendix I**  
Sample Flight Plan

**DLNR-DOFAW Flight Plan**

Date of Mission: Mission Leader (OIC):  
Vendor: Pilot:  
Vendor phone: Aircraft:

**Detailed description of mission**

Purpose of mission:

Type of mission (e.g., passenger, sling load, reconnaissance, etc.):

Estimated time of departure: Estimated time of arrival/return:  
Departure location: Destination:

Estimated time of pick-up: Estimated time of arrival/return:  
Pick-up location: Destination:

Route:

Alternate route:

Personnel: (name, organization, function)  
*e.g. Joe Smith, DOFAW, passenger*

Estimated load (in addition to passengers):

Special needs (e.g., for aerial shoot missions, include type of weapon; etc.):

**Flight Following**

Flight follower: Flight follower phone #:  
Radio check times: Communication method/radio frequency:

**Submitted by:** Date:

**Approved by:** Date:

**Emergency Information**

Fire Department/Rescue: 911 OR DOFAW Branch:  
FAA:  
DOFAW Admin: 808-587-0166  
Vendor phone: